

## CLAIMS

What is claimed is:

1. A method, comprising:

storing a list of physical resource objects;

storing a list of virtual resource objects;

storing a list of parent and child objects; and

creating a tree of relationships for the parent and child objects and the physical and virtual resources.

2. The method of claim 1, wherein storing a list of virtual resource objects includes storing an object representing system memory bandwidth.

3. The method of claim 2, wherein storing a list of child objects includes storing an object representing a functional unit that consumes bandwidth.

4. The method of claim 3, wherein storing an object representing a functional unit that consumes bandwidth includes storing an indication of the amount of bandwidth consumed.

5. The method of claim 4, wherein storing an object representing a functional unit that consumes bandwidth includes storing an object that represents an overlay unit.

6. The method of claim 4, wherein storing an object representing a functional unit that consumes bandwidth includes storing an object that represents a cursor unit.

7. The method of claim 4, wherein storing an object representing a functional unit that consumes bandwidth includes storing an object that represents a display output unit.

8. The method of claim 1, wherein storing a list of virtual resource objects includes storing an object representing local graphics memory bandwidth.

9. The method of claim 8, wherein storing a list of child objects includes storing an object representing a functional unit that consumes bandwidth.

10. The method of claim 9, wherein storing an object representing a functional unit that consumes bandwidth includes storing an indication of the amount of bandwidth consumed.

11. The method of claim 10, wherein storing an object representing a functional unit that consumes bandwidth includes storing an object that represents an overlay unit.

12. The method of claim 10, wherein storing an object representing a functional unit that consumes bandwidth includes storing an object that represents a cursor unit.

13. The method of claim 10, wherein storing an object representing a functional unit that consumes bandwidth includes storing an object that represents a display output unit.

14. A method, comprising:  
maintaining a record of available resources;  
maintaining a record of consumed resources;  
tracking relationships among producers and consumers; and  
updating record of available and consumed resources upon a change in relationship among producers and consumers.

15. The method of claim 14, wherein tracking relationships among producers and consumers includes tracking a relationship between a system memory bandwidth producer and a system memory bandwidth consumer.

16. The method of claim 14, wherein tracking relationships among producers and consumers includes tracking a relationship between a graphics local memory bandwidth producer and a graphics local memory consumer.

17. A machine-readable medium having stored thereon instructions which, when executed by a computer system, causes the computer system to perform a method comprising:

storing a list of physical resource objects;  
storing a list of virtual resource objects;  
storing a list of parent and child objects; and

creating a tree of relationships for the parent and child objects and the physical and virtual resources.

18. The machine-readable medium of claim 17, wherein storing a list of virtual resource objects includes storing an object representing system memory bandwidth.

19. The machine-readable medium of claim 18, wherein storing a list of child objects includes storing an object representing a functional unit that consumes bandwidth.

20. The machine-readable medium of claim 19, wherein storing an object representing a functional unit that consumes bandwidth includes storing an indication of the amount of bandwidth consumed.

21. The machine-readable medium of claim 20, wherein storing an object representing a functional unit that consumes bandwidth includes storing an object that represents an overlay unit.

22. The machine-readable medium of claim 20, wherein storing an object representing a functional unit that consumes bandwidth includes storing an object that represents a cursor unit.

23. The machine-readable medium of claim 20, wherein storing an object representing a functional unit that consumes bandwidth includes storing an object that represents a display output unit.

24. The machine-readable medium of claim 17, wherein storing a list of virtual resource objects includes storing an object representing local graphics memory bandwidth.

25. The machine-readable medium of claim 24, wherein storing a list of child objects includes storing an object representing a functional unit that consumes bandwidth.

26. The machine-readable medium of claim 25, wherein storing an object representing a functional unit that consumes bandwidth includes storing an indication of the amount of bandwidth consumed.

27. The machine-readable medium of claim 26, wherein storing an object representing a functional unit that consumes bandwidth includes storing an object that represents an overlay unit.

28. The machine-readable medium of claim 26, wherein storing an object representing a functional unit that consumes bandwidth includes storing an object that represents a cursor unit.

29. The machine-readable medium of claim 26, wherein storing an object representing a functional unit that consumes bandwidth includes storing an object that represents a display output unit.

30. A machine-readable medium having stored thereon instructions which, when executed by a computer system, causes the computer system to perform a method comprising:

maintaining a record of available resources;

maintaining a record of consumed resources;

tracking relationships among producers and consumers; and

updating record of available and consumed resources upon a change in relationship among producers and consumers.

31. The machine-readable medium of claim 30, wherein tracking relationships among producers and consumers includes tracking a relationship between a system memory bandwidth producer and a system memory bandwidth consumer.

32. The machine-readable medium of claim 31, wherein tracking relationships among producers and consumers includes tracking a relationship between a graphics local memory bandwidth producer and a graphics local memory consumer.